

Figure 1A

Nucleic acid (SEQ ID NO: 10) and protein (SEQ ID NO: 11) sequence of Δ Chy DNA polymerase

1 ATGGAAGCTTGCCGAACACGAAAATTTAGCAAAATATCGAAACAATTAGCTACAATC
1 M E K L A E H E N L A K I S K Q L A T I

61 CTGCGGAAATACCGTTAGAAATCTCCCTGGAAGATTTAAAAGTTAAAGAACCTAATTAT
21 L R E I P L E I S L E D L K V K E P N Y

121 GAAGAAGTTGCTAAATTATTTCTTCACCTTGAGTTTAAAAGCTTTTAAAAGAAATAGAA
41 E E V A K L F L H L E F K S F L K E I E

181 CCAAAAATAAAGAAAGAATACCAGGAAGGTAAAGATTTGGTGCAAGTTGAACTGTAGAA
61 P K I K K E Y Q E G K D L V Q V E T V E

241 ACGGAAGGACAGATTGCAGTAGTTTTTAGTGATGGATTTTATGTTGATGACGGGAAAAA
81 T E G Q I A V V F S D G F Y V D D G E K

301 ACAAAGTTTACTCTTTAGACCGGCTGAATGAAATAGAGGAAATATTTAGGAATAAAAAA
101 T K F Y S L D R L N E I E E I F R N K K

361 ATTATTACCGACGATGCCAAAGGAATTTATCATGTCTGTTTAGAAAAAGGTCTGACTTTT
121 I I T D D A K G I Y H V C L E K G L T F

421 CCCGAAGTTTGTTTTGATGCGCGGATTGCAGCTTATGTTTTAAACCCGGCCGACCAAAT
141 P E V C F D A R I A A Y V L N P A D Q N

481 CCCGGCCTCAAGGGGCTTTATCTAAAGTATGACTTACCGGTGTATGAAGATGTATCTTTA
161 P G L K G L Y L K Y D L P V Y E D V S L

541 AACATTAGAGGGTTGTTTTATTTAAAAAAGAAATGATGAGAAAAATCTTTGAGCAGGAG
181 N I R G L F Y L K K E M M R K I F E Q E

601 CAAGAAAGGTTATTTTATGAAATAGAACTTCCTTTAACTCCAGTTCTTGCTCAAATGGAG
201 Q E R L F Y E I E L P L T P V L A Q M E

661 CATACCGGCATTCAGGTTGACCGGAAGCTTTAAAAGAGATGTCGTTAGAGCTGGGAGAG
221 H T G I Q V D R E A L K E M S L E L G E

Figure 1B

721 CAAATTGAAGAGTTAATCCGGGAAATTTATGTGCTGGCGGGGAAGAGTTTAACTTAAAC
241 Q I E E L I R E I Y V L A G E E F N L N

781 TCGCCCAGGCAGCTGGGAGTTATTCTTTTGA AAAACTTGGGCTGCCGGTAATTAAAAAG
261 S P R Q L G V I L F E K L G L P V I K K

841 ACCAAAACGGGCTACTCTACCGATGCGGAGGTTTTGGAAGAGCTCTTGCCTTTCCACGAA
281 T K T G Y S T D A E V L E E L L P F H E

901 ATTATCGGCAAAATATTGAATTACCGGCAGCTTATGAAGTTAAAATCCACTTATACTGAC
301 I I G K I L N Y R Q L M K L K S T Y T D

961 GGCTTAATGCCTTTAATAAATGAGCGTACCGGTAAACTTCACACTACTTTTAACCAGACC
321 G L M P L I N E R T G K L H T T F N Q T

1021 GGTACTTTAACCGGACGCCTGGCGTCTTCGGAGCCCAATCTCCAAAATATTCCCATCCGG
341 G T L T G R L A S S E P N L Q N I P I R

1081 TTGGA ACTCGGTCGGAAATTACGCAAGATGTTTATACCTTCACCGGGGTATGATTATATT
361 L E L G R K L R K M F I P S P G Y D Y I

1141 GTTTCGGCGGATTATTCCCAGATTGAATTAAGGCTTCTTGCCCATTTTCCGAAGAGCCC
381 V S A D Y S Q I E L R L L A H F S E E P

1201 AAGCTTATTGAAGCTTACCAAAAAGGGGAGGATATTACCGGAAAACGGCCTCCGAGGTG
401 K L I E A Y Q K G E D I H R K T A S E V

1261 TTCGGTGTATCTTTGGAAGAAGTTACTCCCGAGATGCGCGCTCATGCCAAGTCGGTGAAC
421 F G V S L E E V T P E M R A H A K S V N

1321 TTCGGCATTGTTTATGGCATTAGTGATTTTGGTTTAGGCAGAGACTTAAAGATTCCCCGG
441 F G I V Y G I S D F G L G R D L K I P R

1381 GAGGTTGCCGGTAAGTACATTAAAAATTATTTTGCCA ACTATCCCAAAGTGCGGGAGTAT
461 E V A G K Y I K N Y F A N Y P K V R E Y

Figure 1C

1441 CTCGATGAACTTGTCCGTACGGCAAGAGAAAAGGGATATGTGACCACTTTATTTGGGCGA
481 L D E L V R T A R E K G Y V T T L F G R

1501 AGACGCTATATTCCTGAGCTATCTTCAAAAACCGCACGGTTCAGGGTTTTGGCGAAAGG
501 R R Y I P E L S S K N R T V Q G F G E R

1561 ACGGCCATGAATACTCCCCTTCAGGGCTCGGCTGCCGATATTATTAAGCTTGCAATGATT
521 T A M N T P L Q G S A A D I I K L A M I

1621 AATGTAGAAAAAGAACTTAAAGCCCGTAAGCTTAAGTCCCGGCTCCTTCTTTTCGGTGCAC
541 N V E K E L K A R K L K S R L L L S V H

1681 GATGAGTTAGTTTTAGAAAGTGCCGGCGGAAGAGCTGGAAGAGGTAAAAGCGCTGGTAAAA
561 D E L V L E V P A E E L E E V K A L V K

1741 GGGGTTATGGAGTCGGTGGTTGAACTGAAAGTGCCTTTAATCGCTGAAGTTGGTGCAGGC
581 G V M E S V V E L K V P L I A E V G A G

1801 AAAAACTGGTATGAAGCGAAGTAA
601 K N W Y E A K *

Figure 2:

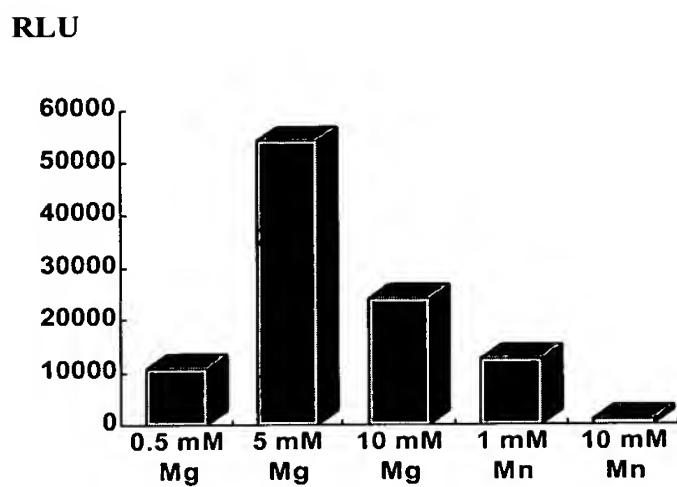


Figure 3:

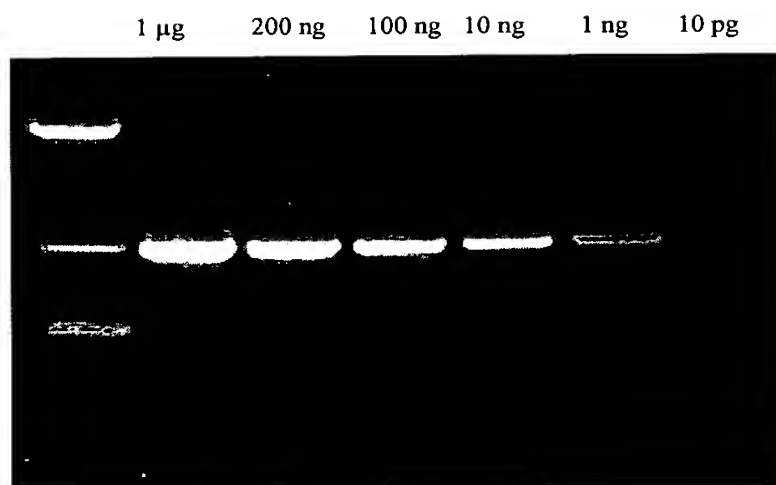
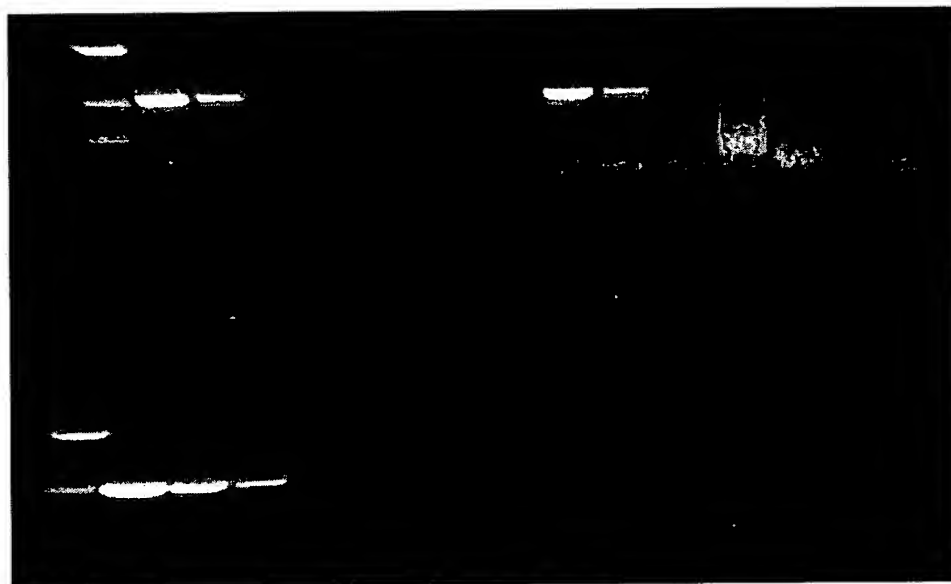


Figure 4:

	Tth "one tube"								Δ Chy "one tube"							
M	1	0.1	10	1	100	10	1	1	0.1	10	1	100	10	1		
	μ g	μ g	ng	ng	pg	pg	pg	μ g	μ g	ng	ng	pg	pg	pg		



M	1	0.1	10	1	100	10	1
	μ g	μ g	ng	ng	pg	pg	pg
	Δ Chy "two tube"						

Figure 5:

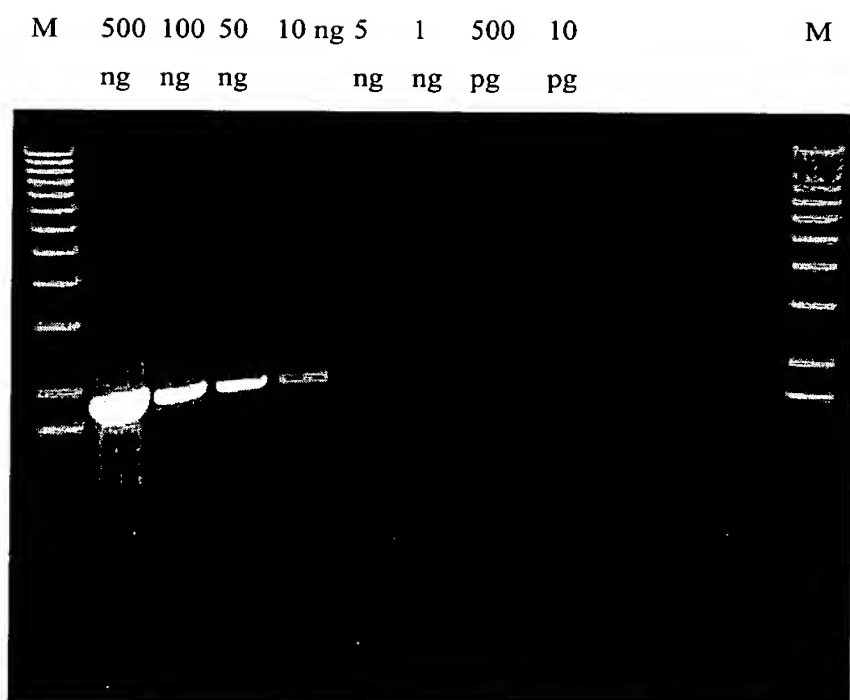


Figure 6:

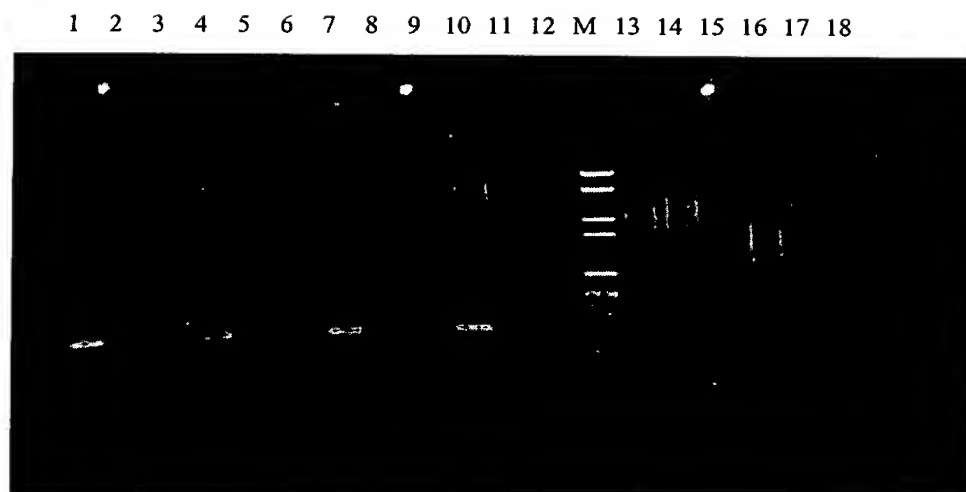


Figure 7:

